# DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

#### LAKE TROPHIC DATA

#### MORPHOMETRIC:

Lake: EAST POND	Lake Area (ha):	2.70
Town: LIVERMORE	Maximum depth (m):	7.9
County: Grafton	Mean depth (m):	3.4
River Basin: Merrimack	Volume (m³):	91000
Latitude: 44°00'27" N	Relative depth:	4.3
Longitude: 71°33'59" W	Shore configuration:	1.37
Elevation (ft): 2540	Areal water load (m/yr):	33.71
Shore length (m): 800	Flushing rate (yr <sup>-1</sup> ):	10.00
Watershed area (ha): 119.1	P retention coeff.:	0.42
<pre>% watershed ponded: 0.0</pre>	Lake type: n	atura1

BIOLOGICAL:	23 February 1995	25 August 1994
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 99%	DINOBRYON 99%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		1.64
DOM. ZOOPLANKTON (% TOTAL) #1	ACTINOPOD SPP. 64%	CALANOID COPEPOD 35%
#2	CILIATE SPP. 29%	BOSMINA 24%
#3		DAPHNIA 24%
ROTIFERS/LITER	2	8
MICROCRUSTACEA/LITER	2	46
ZOOPLANKTON ABUNDANCE (#/L)	83	54
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		7.9 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	7.6	9.4
BACTERIA (E. coli, #/100 ml) #1		1
#2		
#3		

# SUMMER THERMAL STRATIFICATION:

### not stratified

Depth of thermocline (m): None Hypolimnion volume  $(m^3)$ : None Anoxic volume  $(m^3)$ : None

CHEMICAL:			EAST PONI		
	23 Febru	ary 1995	25 <i>I</i>	August 199	4
DEPTH (m)	2.0	4.0	2.5		5.0
pH (units)	5.6	5.3	6.2		6.2
A.N.C. (Alkalinity)	2.5	2.2	2.6		2.9
NITRATE NITROGEN	0.27	0.27	0.13		0.10
TOTAL KJELDAHL NITROGEN	< 0.10	0.10	< 0.10		0.10
TOTAL PHOSPHORUS	0.005	0.005	0.017		0.005
CONDUCTIVITY (µmhos/cm)	21.6	21.2	19.5		19.5
APPARENT COLOR (cpu)	7	7	16		16
MAGNESIUM			0.14		
CALCIUM			1.4		
SODIUM			1.0		
POTASSIUM			0.60		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	4	4	4		4
TN : TP		74			40
CALCITE SATURATION INDEX			4.5		

All results in mg/L unless indicated otherwise

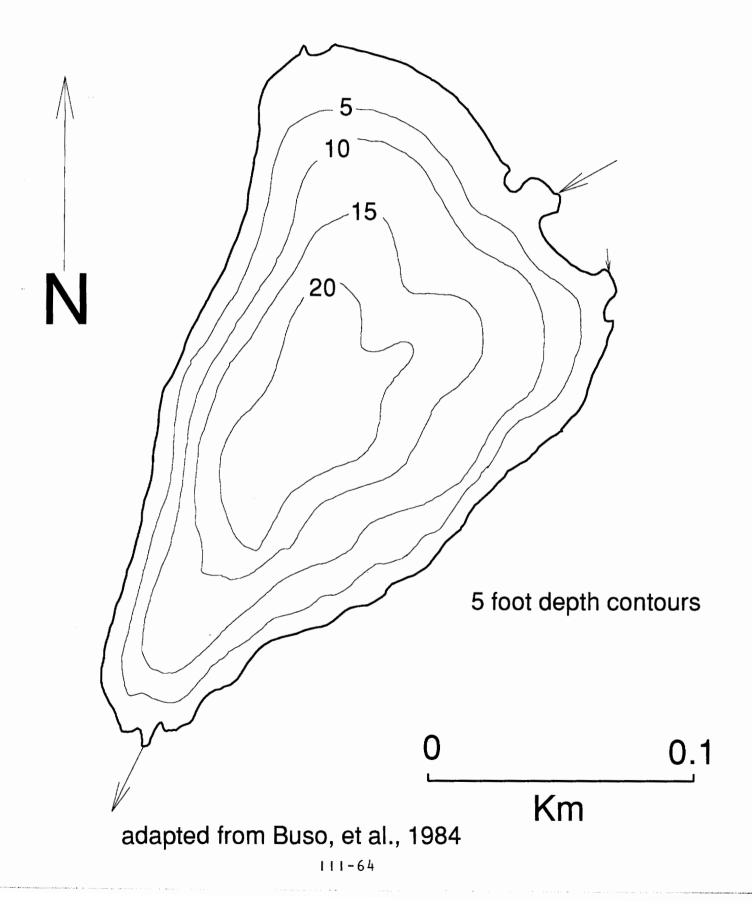
# TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	0	1	0	1	Oligo.

# **COMMENTS:**

- This is a high elevation remote trout pond in the White Mountain National Forest that was sampled jointly with the NH Fish and Game Department. It has been sampled by helicopter since 1992 for acid rain related parameters.
- 2. This is a slightly acid, clear water oligotrophic pond with exceptional water clarity.
- 3. This remote pond was dredged for diatomaceous earth between 1910 and 1916.

# East Pond Livermore



#### FIELD DATA SHEET

LAKE: EAST POND

DATE: 08/25/94

TOWN: LIVERMORE

WEATHER: MOSTLY SUNNY; WARM

DEPTH (M)	TEMP *DISSOLVED OXYGEN		OXYGEN SATURATION		
0.1	17.5	9.7	99 %		
1.0	17.0	9.6	98 %		
2.0	17.0	9.6	98 %		
3.0	16.9	9.6	96 %		
4.0	16.8	9.5	95 %		
5.0	16.5	9.4	94 %		
6.0	16.3	9.4	94 %		
6.5	16.2	9.4	94 %		
7.5	16.2	9.4	94 %		

SECCHI DISK (m): 7.9 VOB

**COMMENTS:** Not thermally stratified despite being over

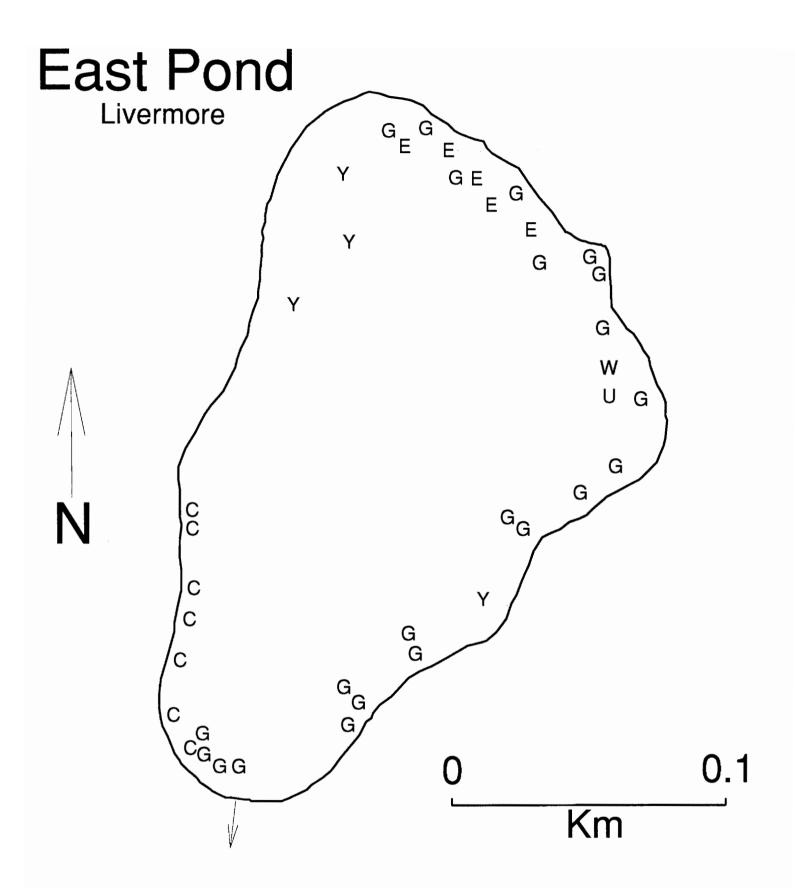
BOTTOM DEPTH (m): 7.9

TIME:

25 feet deep; clear water allows sunlight penetration to the bottom.

1230

\*Dissolved oxygen values are in mg/L



# AQUATIC PLANT SURVEY

LAKE: EAST POND TOWN: LIVERMORE DATE: 08/25/94 PLANT NAME Кеу ABUNDANCE **GENERIC** COMMON Scattered G Grass family Gramineae Chamaedaphne calyculata Leatherleaf Sparse Y Nuphar Yellow water lily Sparse E Eriocaulon septangulare Pipewort Sparse W Potamogeton Pondweed Sparse U Utricularia Bladderwort Sparse

OVERALL ABUNDANCE: Scattered

# **GENERAL OBSERVATIONS:**

1. Alders and fir trees were present along the southwestern shore.